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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:	§	
	§	Group Art Unit: 1713
Lopez et al	§	
	§	
Filed: September 12, 2003	§	
	§	Examiner: Helen Lee Pezzuto
Serial No.: 10/662,159	§	
	§	
For: Compositions for Thermal Insulation	§	
And Methods of Using the Same	§	Attorney Docket No.: 020569-05801
	§	(P202-1294-US)

Commissioner for Patents
P. O. Box 1450
Alexandria, Virginia 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132 OF PAUL H. JAVORA, Ph.D.

Dear Sir:

I, Paul H. Javora, do hereby declare and state that:

1. I am an inventor of U.S. patent application serial no. 10/662,159 ("Application"), filed on September 12, 2003.

2. I hold a Bachelor of Science degree in chemistry and a Master of Science degree in chemistry from St. John's University (New York) and a Ph.D. degree in inorganic chemistry from The University of Texas, Austin.

3. In July, 1984, I began employment with OSCA, Inc. ("OSCA"). OSCA was acquired by BJ Services Company ("BJS"), Houston, Texas, in June, 2002. I am currently employed by BJS. BJS is the assignee of Application. I am presently Project Manager, Research Technology, Completion Processes Group, at BJS.

4. Prior to my employment with OSCA, I worked for about 8 years in research and technical management positions for Magcobar Drilling Fluids, a company which specialized in drilling fluid technology.

5. I have a total of 31 years of experience in the research and development of such oilfield chemicals as completion and workover fluids, drill-in and drilling fluids, drill-in and

drilling fluid displacements, drill-in and drilling fluid filter cake removal, clear brine reclamation, and corrosion inhibitors.

6. I have read and reviewed the Office Action of 23 February 2007 rendered in the proceeding relating to Application. I have also read and understand the following references cited by the Examiner in the Office Action: U.S. Patent No. 5,785,747 ("*Vollmer*"), U.S. Patent No. 6,581,701 ("*Heying*"), U.S. Patent No. 4,664,816 ("*Walker*"), U.S. Patent No. 4,836,940 ("*Alexander*"), U.S. Patent No. 5,502,082 ("*Unger*"), U.S. Patent No. 5,965,651 ("*Ishii*") and U.S. Patent No. 5,077,336 ("*Nakashita*"). I am a co-inventor of *Vollmer*.

7. The claims of Application are directed to a thermal insulating composition containing at least one water-superabsorbent polymer, a viscosifying polymer and water and/or brine.

8. *Heying*, *Walker* and *Alexander* are each directed to lost circulation materials ("LCM") which are used to control the loss of a whole fluid, such as the mud or loss control pill, into the formation. Lost circulation materials are used in well treatment processes when drilling fluid is literally lost (i.) into fractures induced by excessive mud pressures; (ii.) into pre-existing open fractures; or (iii.) into large openings with structural strength. An enormous variety of LCMs exist and may be divided into four categories: 1) fibrous materials, such as shredded sugar cane stalks, cotton fibers, hoghair, shredded automobile tires, sawdust, etc.; 2) flaky materials, such as shredded cellophane, mica flakes, wood chips, etc.; 3) granular materials, such as ground nutshells or vitrified, expanded shale particles, etc.; and, 4) cement and other slurries whose strength increases after placement. Essentially all LCMs are particulate materials designed to plug the formation and cause significant, severe formation damage. LCM's are therefore designed to plug the formation and prevent further loss of fluid.

9. *Vollmer* disoloses a method of preventing fluid loss wherein a brine is thickened with a viscosifier based composition. The term "fluid loss" in the industry (and in *Vollmer*) refers to the loss of the filtrate or the liquid portion of a fluid into the formation wherein the fluid is a mud, brine or fluid loss control pill. In contrast to LCMs which cause damage to the formation, the fluid loss control additives of *Vollmer* are designed to be non-damaging. In addition to not creating formation damage, the additives of *Vollmer*, which are used to viscosify low- and high- density brines, do not evidence the compatibility problems seen in the prior art.

10. *Heying* is directed to the addition of dry materials to water or aqueous brines. *Vollmer* specifically discusses the undesirability of adding dry materials to water or aqueous brines. There is no reason why one of ordinary skill in the art would have been motivated to combine *Heying* and *Vollmer* since *Heying* expressly teaches the addition of a granular material to the borehole and *Vollmer* expressly states the undesirability of using solid materials to thicken brines. Neither would one of skill in the art have been motivated to use a water-superabsorbent polymer as a component of a pumpable composition containing a viscosifying polymer based on the teaching of *Heying*.

11. *Walker*, like *Heying*, does not disclose the presence of a viscosifying polymer. In *Walker*, a water absorbent polymer is encapsulated by a film or waxy protective casing such that the water absorbent polymer melts once circulation has terminated. The polymer is then released to absorb water. The resulting expanded material then functions to seal off fractures and large pores. Like *Heying*, the water-absorbent composition of *Walker* is not pumpable.

12. *Alexander* discloses a pelletized composition for use as a lost circulation additive. The pelletized composition contains a "water-swellable absorbent resin". The pellets of *Alexander* maintain their original size as they pass through the borehole. The pelletized composition of *Alexander* does not contain a viscosifying polymer. Nor is the composition of *Alexander* pumpable.

13. In light of the above paragraphs, the fluid loss control method addressed in *Vollmer* and the LCM methodology of *Heying*, *Walker* and *Alexander* are two different and distinct approaches to control the loss of a fluid in a subterranean formation. There is no correlation between the two approaches and the materials used in these methods. The objectives and methodologies of *Vollmer* and *Heying*, *Walker* or *Alexander* in using the water-absorbent polymer are not analogous and one of ordinary skill in the art would not have been motivated to combine any of *Heying*, *Walker* or *Alexander* with *Vollmer* to render a pumpable thermal insulating composition. The use of LCMs, which cause formation damage, is inconsistent with the objectives of *Vollmer*. Thus, one of skill in the art would not have been motivated to search the literature for formation-damaging loss circulation materials (LCMs) for their inclusion in the formulations of *Vollmer*, designed to be non-damaging.

14. *Unger* discloses a process of making a solid crosslinked highly-porous superabsorbent polymer which exhibits high compressive strength. The resulting product is a

solid absorbent having a hollow matrix which is capable of entrapping air. The hydrogel disclosed in *Unger* is not a superabsorbent. Instead, the solid crosslinked porous absorbent body of *Unger*, derived from the hydrogel, is the superabsorbent. Note that the gelling agent functions as the crosslinking agent and the gelling agent is added to the hydrogel in order to form the crosslinked polymer which, in turn, when dried, is the superabsorbent. In other words, the absorbent material in *Unger* is the final reaction product of pregel and crosslinking agent; the hydrogel serving as a building block to make the porous solid. The thermal insulating composition of Application is pumpable and contains the superabsorbent. *Unger* does not disclose a pumpable composition containing a superabsorbent.

15. *Ishii* also discloses a process of making an absorbent material. *Ishii* discloses that the combination of superabsorbent polymer and viscosifying polymer render a "liquid-absorbing material composition", illustrated in Examples 1-7. This composition is *not* a liquid absorbent material. Claim 1 of *Ishii* clearly states the invention to be "a composition *for preparing a liquid-absorbing material*". The liquid-absorbing material in *Ishii* is the molded product.

16. *Nakashita* discloses a composition containing a plasticizer, water-soluble or absorbing gel and polyvinyl chloride. An emulsifier is further required in order to properly mix the water-soluble gel or suspension and polyvinyl chloride. The resulting product is a flexible rubber which is capable of retaining its shape. The compositions of Application are pumpable and thus could not behave like rubber. Further, *Nakashita* does not disclose a composition of a water-absorbent polymer and a viscosifying agent.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

DATED: May 23, 2007

Paul H. Javora